

AMENDMENTS TO THE SPECIFICATION:

The paragraph beginning at line 9 of page 1 has been amended as follows:

This invention relates to a transfer sheet, wherein a hair-like [transplanted] transplant sheet is furnished with a parting agent. The hair-like sheet has a short fiber layer which is provisionally bonded with an adhesive onto a base sheet. Over the short fiber layer, designs, patterns and letters are fixed by an electrophoto copying machine using a toner. The fixed toner image over the short fiber layer is effectively and smoothly transferred on cloth, wooden panels and so on.

The paragraph beginning at line 5 of page 2 has been amended as follows:

In the transfer sheet disclosed in this Japanese Patent No. 2840918, because the toner image layer can be fixed on the sheet furnished with a parting agent by the electrophoto copying machine which is simple, when [comapred] compared with a screen printing, an offset printing, a gravure printing and other similar printing methods, which need complicated process [platea] plates or special printing techniques, this transfer sheet does not need such process plates or special printing techniques, and thus production costs come very inexpensive.

The paragraph beginning at line 12 of page 2 has been amended as follows:

Among marketed transfer sheets, there already exists another transfer sheet, wherein an image layer is formed on a short fiber layer placed on a base sheet via a tacky agent, where the short fiber layer is composed of a hair-like [transplanted] transplant sheet furnished with a parting agent and which is provisionally bonded with the hair-like [transplanted] transplant sheet.

The paragraph beginning at line 16 of page 2 has been amended as follows:

An example of this transfer sheet is provisional Japanese Patent Application Publication No. 5-177996 which discloses a thermo adhesive layer having a design which is provisionally bonded on a fundamental material furnished with a parting agent such as a paper or plastic film. Another adhesive layer with very strong [adhension] adhesion and elasticity is prepared over the thermo adhesive layer. A [transplanted] transplant hair-like layer is established by a short fiber selected among cotton, [nyron] nylon resin, acrylic resin, polyester resin which is formed on the adhesive layer, and decorative detailed materials such as metallic [powerders] powders, foil pieces, resin grains and colored glass pieces are prepared on the upper surface of the [transplanted] transplant hair-like layer. A masking viscous tape which loses its viscosity when temperature increases by heat is [overlayed]

overlaid on the [~~transplanted~~] transplant hair-like layer, and finally a thermal transfer applique is obtained.

The paragraph beginning at line 13 of page 3 has been amended as follows:

A thermal transfer sheet where an image is fixed on a marketed short fiber layer furnished with a hair-like [~~transplanted~~] transplant sheet and a parting agent sheet is not obtained by an electrophoto copying machine using a toner. The image is obtained by a screen printing machine. The thermal transfer applique of said Provisional Japanese Patent Application Publication No. 5-177996 and the thermal transfer sheet of said Provisional Japanese [~~Utlity~~] Utility Model Publication No. 3-106396 adopt screen printing to obtain the design or the image.

The paragraph beginning at line 21 of page 3 has been amended as follows:

The present inventor tried to fix a toner image on a short fiber layer equipped of a hair-like [~~transplanted~~] transplant sheet furnished with a parting agent, by using an electrophoto copying machine, in the same manner as disclosed in Japanese [~~Paten~~] Patent No. 2840918 and [~~he~~] the also proposed details of the same in a Provisional Japanese Patent Application Publication No. 2000-289392. However, these trials have had [~~probolems~~] problems. The [~~tonner~~] toner images obtained thereby on the marketed short fiber layer were not clear and a part of transferred image on the short

fiber layer may remain on a base sheet. This is because the toner could not reach the deep bottom end of the short fiber layer of the hair-like [transplated] transplant sheet.

The paragraph beginning at line 3 of page 4 has been amended as follows:

In order to resolve the above problem, the inventor made various experiments and tests, and he found that the marketed hair-like [transplated] transplant sheet was of inferior conductivity, and this inferior conductivity caused the toner not to reach deeply into the short fiber layer. Accordingly, through further tests and research, Applicant tried to obtain a proper cohesive agent of high conductivity to be used for the hair-like [transplated] transplant sheet. Applicant finally found that, if he adopted an acrylic solvent cohesive layer on the hair-like [transplanted] transplant sheet, the conductivity on the sheet is improved so that the toner penetrated deeply into the short fiber layer, whereas the toner image was efficiently fixed and the clear image was formed.

The paragraph beginning at line 12 of page 4 has been amended as follows:

Then, the short fiber layer of the hair-like [transplated] transplant sheet furnished with the parting agent is provisionally bonded on the base sheet via the acrylic solvent cohesive layer, and thus the toner image is fixed and the clear image is obtained. Over the short fiber layer on which the toner image is fixed, an

acrylic urethane resin layer is formed in the same manner as the transfer sheet disclosed in Japanese Patent No. 2840918. Further, a hot-melt adhesive layer is placed thereon and this obtained transfer sheet was tested many times by transferring by a heating and pressing method on the cloth subject. However, in this experiment, the short fiber layer was found to remain partially on the base sheet, which did not attain the present purpose.

The paragraph beginning on the last line of page 4 has been amended as follows:

In view of explained procedures, this invention has an object to provide a transfer sheet comprising:

a hair-like [~~transplated~~] transplant sheet comprising an acrylic solvent adhesive layer a parting agent on which a short fiber layer is provisionally bonded which is placed onto a base sheet;

a toner image fixed on the short fiber layer with a toner by an electrophoto copying machine;

at least one acrylic ester resin layer binder layer placed on the short fiber having the toner image; and

a hot-melt adhesive layer also placed on the binder layer;

wherein the toner image and the short fiber layer can be transferred on a subject receiver to be transferred.

The paragraph beginning at line 12 of page 5 has been amended as follows:

The present invention has another object to provide a transfer sheet comprising:

a hair-like [transplated] transplant sheet furnished an acrylic solvent cohesive layer parting agent on which a short fiber layer is provisionally bonded which is placed onto a base sheet;

a toner image fixed on the short fiber layer with a toner by an electrophoto copying machine;

a transparent acrylic ester resin layer as a binder layer placed on the short fiber having the fixed toner image;

[an] a colored acrylic urethane resin layer placed on the transparent binder layer;

a hot-melt adhesive layer also placed on the colored layer;
and

wherein the toner image and the short fiber layer can be transferred on a subject receiver.

The paragraph beginning at line 5 of page 6 has been amended as follows:

FIG.2A shows a hair [transplanted] transplant sheet furnished with a parting agent, wherein an adhesive is applied on a base sheet as [an] a solvent cohesive layer; and a short hair-like fiber layer is implanted [with hair-like] and is [simulteneuously] simultaneously and provisionally bonded on the solvent cohesive layer.

The paragraph beginning at line 9 of page 6 has been amended as follows:

FIG.2B shows a toner image such as designs, patterns, photos and letters which is fixed on the short fiber of the hair-like [transplated] transplant sheet with a parting agent.

The paragraph beginning at line 7 of page 7 has been amended as follows:

In these drawings, the numeral 1 is a transfer sheet which comprises a hair-like [transplanted] transplant sheet furnished with a parting agent (5) on which a short fiber layer (4) is provisionally bonded onto a base sheet (2) via an acrylic solvent cohesive layer (3). A toner image (6) is fixed by an electrophoto copying machine using a toner on the short fiber layer (4) of the hair-like [transplanted] transplant sheet (5). A transparent acrylic ester resin binder layer (7) is placed on the short fiber layer (4) having the toner image (6), and a hot-melt adhesive layer (8) is placed on the transparent binder (7).

The paragraph beginning at line 14 of page 7 has been amended as follows:

The hair-like [transplanted] transplant sheet furnished with a parting agent (5) is basically constituted by three elements, such as the base sheet (2) which is made from paper or plastic films, the solvent cohesive layer (3) where the acrylic solvent cohesive is applied on the base sheet (2), the short fiber layer

(4) where a short fiber (9) selected from a group of [nyron] nylon, polyester, acryl and/or rayon is transplanted and provisionally bonded thereon. This [transplanted] transplant sheet (5) is now obtained on the open market. As our further explanation, the expression of "is transplanted and provisionally bonded" means one process, that is to say, the explained process is one [simulteneuous] simultaneous procedure.

The paragraph beginning at line 5 of page 8 has been amended as follows:

As the hot-melt adhesive layer (8), any hot-melt type adhesive including mainly the materials of polyester, [nyron] nylon or urethane prepared in prior arts of the transfer sheet can be used. However, the inventor recommends the following as the proper adhesive agents: The commodity name of "Diamid" including mainly polyester material which is distributed by Dicl Chemical Kabushiki Kaisha, or else the commodity name of "Platamid" including mainly [nyron] nylon material which is distributed by Lirusan Co., Ltd.

The paragraph beginning at 7 up from the bottom of page 8 has been amended as follows:

In the transfer sheet (1) developed by the present invention, for the acrylic solvent cohesive layer (3) the acrylic solvent agent having high conductivity is adopted [in stead] instead of normal adhesive agent, and accordingly when the toner image (6) is fixed on the hair-like [transplanted] transplant sheet furnished

with the parting agent (5) by the electrophoto copying machine. The hair-like [transplanted] transplant sheet (5) furnished with the parting agent strongly absorbs the toner, and as a result the toner enters deeply into the short fiber layer (4), so that the toner image (6) is efficiently fixed to obtain a clear image thereof.

The paragraph beginning at line 1 of page 9 has been amended as follows:

At the same time, the transparent acrylic ester resin binder layer (7) is placed on the short fiber layer (4) having the toner image (6). The binder layer (7) entwines around each short fiber (9) forming the short fiber layer (4) when heated or pressed. The binder layer (7) also [pnetrates] penetrates into the toner image (6) which enters each gap formed by each short fiber (9). Both the short fiber layer (4) bonded on the hair-like [transplanted] transplant sheet (5) and the toner image layer (6) fixed on the short fiber layer do not remain in the base sheet (2). The fiber layer (4) is, therefore, provisionally bonded to the base sheet (2) by the cohesive layer (3). The toner image (6), the short fiber (4) the cohesive layer (3) and the base sheet (2) are transferred, as shown in FIG.3B, onto a [reciver] receiver.

The paragraph beginning at the last line of page 9 has been amended as follows:

This numeral 11 is a transfer sheet comprising as below:

a hair-like [transplanted] transplant sheet having a parting agent (5) on which a short fiber layer (4) is provisionally bonded onto a base sheet (2) via an acrylic solvent cohesive layer (3);

a toner image (6) which is fixed by an electrophoto copying machine using a toner on the short fiber layer (4) of the hair-like [transplanted] transplant sheet having the parting agent (5);

a transparent acrylic ester resin binder layer (7) which is placed on the short fiber layer (4) having the toner image (6);

a colored acrylic urethane resin layer (12) which is placed on the transparent acrylic ester resin binder layer (7); and

a hot-melt adhesive layer (8) which is placed on the colored acrylic urethane resin layer (12).

The paragraph beginning at line 5 of page 11 has been amended as follows:

A base sheet (2) is around 100 microns thick and made of a polyester film of "Lintec PET75" distributed by Lintec Corporation is prepared, on which an acrylic solvent cohesive layer of "Lintec MF5" distributed by the same corporation is placed to obtain the acrylic cohesive layer (3) approximately 20 microns thick. Then, on the cohesive layer (3), white and semi-transparent rayon piles with one denier diameter distributed by Kabushiki Kaisha Kanahara Piles Industry are transplanted and provisionally bonded, so that a hair-like [transplanted] transplant sheet (5) having a parting agent with the cohesive layer (3) is provided forming a short fiber layer (4) which is about 400 microns thick.

The paragraph beginning at line 14 of page 11 has been amended as follows:

Then, an original color design which is in square shape comprising red, yellow, [~~bule~~] blue and black colors is copied by "Imagio Color 4000" distributed by Ricoh Co., Ltd. with red color toner of "63-6209", yellow color toner of "63-6208", blue color toner of "63-6210" and black color toner of "63-6207" all distributed by Ricoh Co., Ltd. on the short fiber layer (4) of the hair-like [~~transplanted~~] transplant sheet. The toner image (6) is about 10 microns thick and is bonded to the transparent binder (7) and the short fiber layer (4).

The paragraph beginning at line 20 of page 11 has been amended as follows:

Further, on the toner image (6), a transparent acrylic ester resin binder layer (7) of "NKBinder AS-50" which is about 20 microns [~~thickn~~] thick and distributed by Shin Nakamura Chemical Industry Kabushiki Kaisha is placed in accordance with a square shape designed which is copied by a screen printing. Then, three elements such as an acrylic copolymer resin of "New Coat K-2" distributed by Shin Nakamura Chemical Industry Kabushiki Kaisha, an urethane resin of "Ryudye-W · Binder-UF-701TL" distributed by Dianippon Ink Chemical Industry Co., Ltd., and a white titanium powder pigment, are mixed together at ratio 45:45:10, and this mixture is sprayed a little bit wider than the copied design in square shape as a white resin layer (12) approximately 50 microns

thick, and this white resin layer (12) is placed on the obtained transparent binder layer, and on this white resin layer (12), a polyester hot-melt adhesive of "Diamid" distributed by Dical Chemical Kabushiki Kaisha is sprayed by screen printing in accordance with the shape of the white resin layer (11), and after the hot-melt adhesive layer (8) which is approximately 50 microns thick is placed thereon, thus a transfer sheet (11) is now obtained with reference to FIG.4.

The Abstract at page 15 has been amended as follows:

A transfer sheet which uses a toner image, obtained by an [electrophoto] electrophoto copying machine. Designs, patterns, photos and letters are fixed on a base sheet through a hair-like [transplanted] transplant sheet having a parting agent and a short fiber layer is provisionally bonded on the hair-like [transplanted] transplant sheet is clearly transferred with the short fiber layer over a subject receiver of a cloth or a wooden panel. The hair-like [transplanted] transplant sheet having the parting agent furnished with [a] an acrylic solvent cohesive layer is provisionally bonded on a base sheet, and the fixed toner image is obtained by the electrophoto copying machine image on the short fiber layer. [At least] Finally, an acrylic ester resin binder layer is placed on the short fiber having the fixed toner image, while a hot-melt adhesive layer is placed on the binder layer.